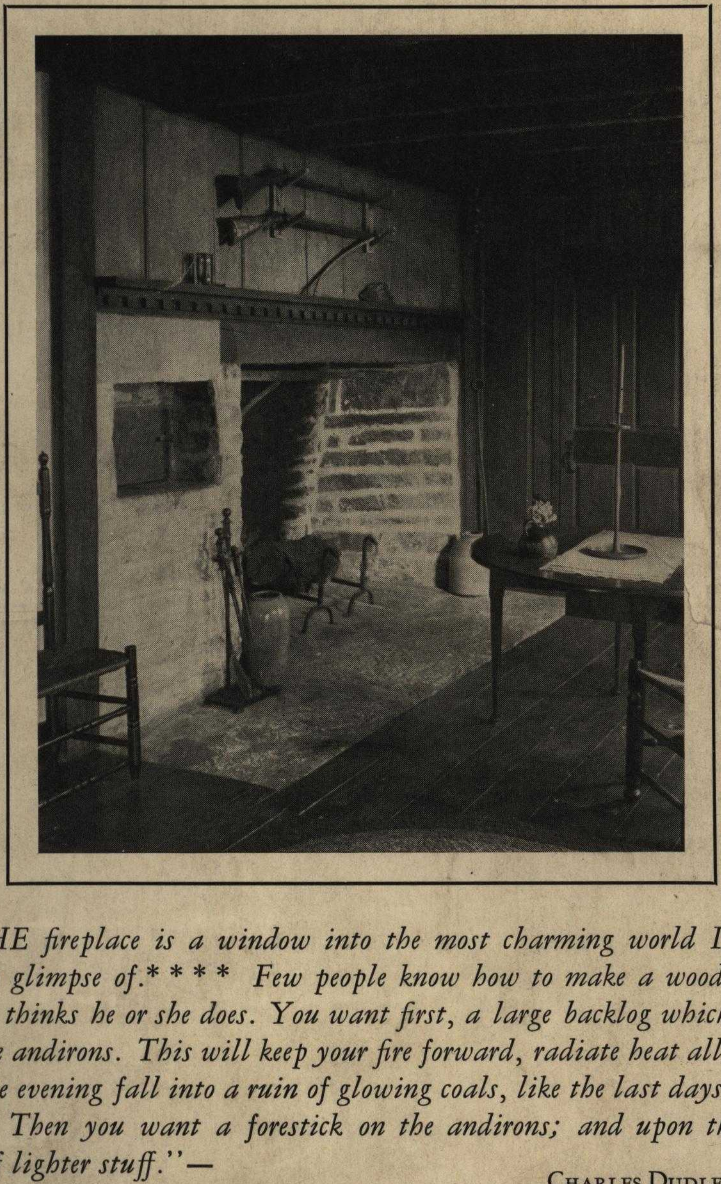
A. I. A. File No. 14

COVERT

fireplace construction



*"THE fireplace is a window into the most charming world I ever had a glimpse of.**** Few people know how to make a wood fire, but everybody thinks he or she does. You want first, a large backlog which does not rest on the andirons. This will keep your fire forward, radiate heat all day, and late in the evening fall into a ruin of glowing coals, like the last days of a good man.** Then you want a forestick on the andirons; and upon these build the fire of lighter stuff."—*

CHARLES DUDLEY WARNER
BACKLOG STUDIES

16-0

The H·W·COVERT COMPANY
243 East 44th Street
NEW YORK CITY

4-10-2

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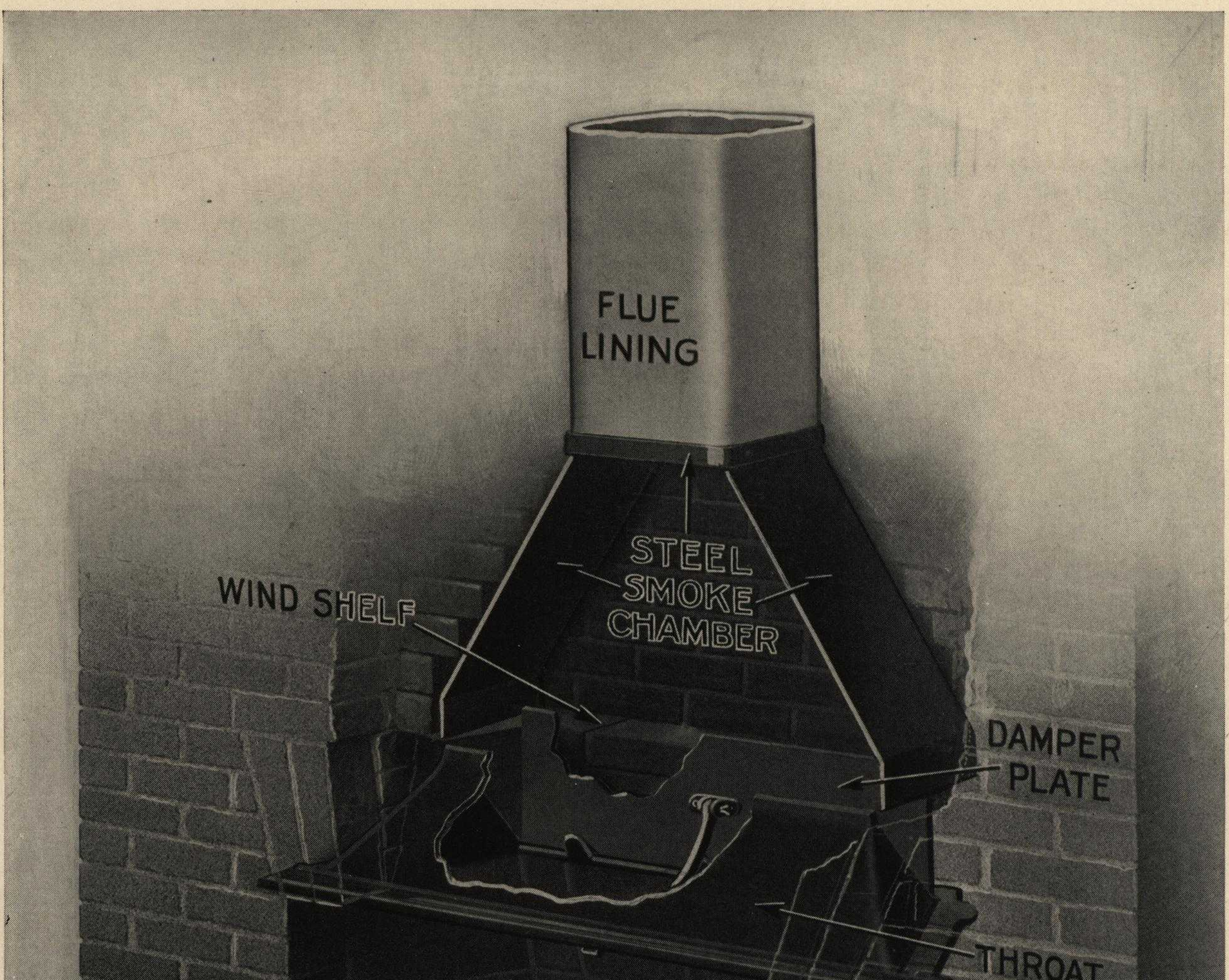
SCHURK IRON WORKS
5425 MANCHESTER AVE.
ST. LOUIS, MO.

Catalog No. 8

HINTS ON FIREPLACE CONSTRUCTION



Proper Construction of a fireplace with the Covert Improved Throat and Damper and Steel Smoke Chamber.

HINTS ON FIREPLACE CONSTRUCTION

NEVER since Colonial days has the wood-burning fireplace been so popular as it is today. It has again come into its proper place in our home life and has come to stay. And, indeed, nothing can give a more agreeable feeling of comfort and cheer than a few sticks or logs blazing on the hearth.

As a ventilator and purifier the fireplace has no equal, constantly withdrawing the stale air from the room and introducing a fresh supply.

If you are to have a fireplace, have a good honest one designed and constructed for burning wood. Have it so designed and constructed that the smoke will go up the flue, —and not into the room. This is not difficult if the hints and suggestions given in the text and cuts shown in this booklet are followed.

PROPORTIONING THE FIREPLACE OPENING

The opening of the fireplace has a great deal to do with the actual amount of heat which is thrown out into the room, as well as the efficient working of the fireplace.

Depth:

If the fireplace is too deep, the sides will cut off considerable heat radiation, and if too shallow, the smoke is likely to find its way out into the room.

After extensive experimenting it has been determined that a depth of 18 inches at the hearth is ample in fireplaces up to 48 inches in width, and 20 to 24 inches for wider fireplaces.

Splayed sides make the back of the fireplace narrower than the front, and give the fireplace the shape of a reflector, thereby throwing out into the room a maximum of heat. This splay should be about 3½ inches to the foot at each side.

Height:

The height of a fireplace should not be greater than the width, and 30 inches is ample for fireplaces up to 48 inches wide. For higher fireplaces 32 to 34 inches is sufficient. When the architecture of a room demands that the height of a fireplace be greater than the width we suggest that you send us your fireplace details for check-up.

Curving the back of a fireplace should be avoided, as this is likely to throw the smoke out into the room. It is safer to build three courses of brick straight up and then start to slope the back forward on a straight line, at an angle that will bring it up under the entire rear flange of the casting.

As shown by our drawing on the opposite page, only one row of bricks should be carried across the arch, keeping the thickness of the soffit down to 4 inches.

THROAT AND DAMPER

The iron throat relieves the mason of the formation of the most critical part of the fireplace, and its front flange acts as a support for the arch brick and masonry above, no additional angle iron lintel being necessary.

The damper plate allows the flue to be shut off when not in use, or to cut down the opening when the draft is too great.

The throat must be so designed that the smoke may be drawn up to the flue above with little friction, as the easier the path for the rising smoke the less chance for smoke entering the room.

In selecting a damper great care must be taken to be sure that the operating mechanism is simple and strongly made, and designed for permanence. Also it is important that the valve plate be easily removable during construction and for cleaning accumulations of soot from the wind shelf after the fireplace has been in use some time.

HINTS ON FIREPLACE CONSTRUCTION

Covert Dampers are designed by a fireplace expert who formerly practiced architecture. Care was taken to make every type of damper (Ratchet, Rotary and Poker Control) efficient in action, simple in control and substantial in construction.

SMOKE CHAMBER

Formation of Smoke Chamber:

Next to the throat, the smoke chamber is the most important part of the fireplace. The funnel shaped sides of the smoke chamber act as a nozzle, giving the smoke a force up the flue. If the sides of the smoke chamber are rough corbelled steps or if the flue is not in the center of the fireplace this force up the flue will be greatly diminished.

By the use of the Covert Steel Smoke Chamber, the proper shape, capacity and smooth sides of the smoke chamber are obtained. The saving of the mason's time almost pays for the smoke chamber.

This form also induces the building of a wind shelf of adequate size, which prevents smoke being blown into the room by down drafts.

FLUE

A common fault in fireplace construction is that of using too small a flue.

In order to make the fireplace draw properly it is absolutely necessary to have the area of the flue at least one-twelfth of the fireplace opening.

In figuring the area of a square or oblong flue, it should be remembered that the outside measurements are usually given. Thus an 8½ x 13 flue has an inside measurement of 7 x 11½ or 80½ square inches.

For your convenience we give the inside areas of flues usually carried in stock by the mason material dealer.

8½ in. x 8½ in.	52	square inches
8½ in. x 13 in.	80½	square inches
13 in. x 13 in.	127	square inches
13 in. x 18 in.	183	square inches
18 in. x 18 in.	250	square inches

8 inches round	50	square inches
9 inches round	63	square inches
10 inches round	78	square inches
12 inches round	112	square inches
15 inches round	176	square inches
18 inches round	255	square inches

To obtain a clean, efficient flue it is very essential that each length of fire clay lining be carefully lined up with the adjoining lengths, and that the mortar squeezing out of the joint be wiped away from the inside of the flue. The best practice is to stuff a cement bag with hay or shavings and keep it in the flue to catch the mortar droppings, raising it as each length of flue lining is set.

If it is necessary in running the flue up that it be drawn over to clear a beam or fireplace on the next floor, the slope of the flue should not be more than 7 inches in one foot. Great care must be taken in forming the offset by mitering each length of flue and making a neat joint that will not retard the flow of smoke and gases up the flue.

It is a good practice to carry the lining 3 or 4 inches above the chimney top, surrounding the protruding flue lining with mortar and smoothing off at an incline toward the top of the flue.

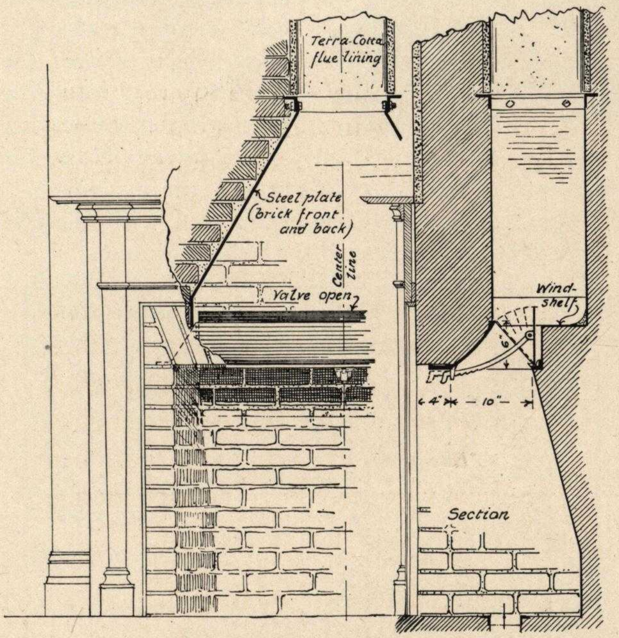
COVERT IMPROVED THROAT AND DAMPER

SIMPLICITY of construction and operation. There are but three parts; the cast-iron frame or throat piece, the valve plate, and the operating ratchet, and these are accessible at all times. No worm gear to become rusted in, break or get out of order.

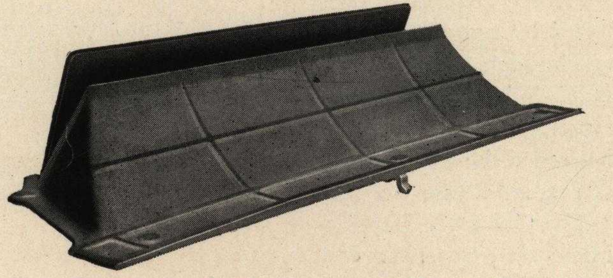
Valve plate may be removed at any time by withdrawing a cotter pin.

The frame is strong and acts as a lintel to support the arch.

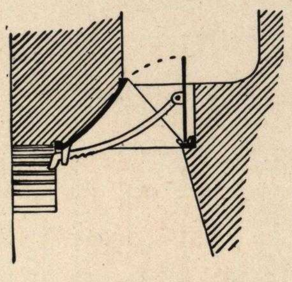
Unnecessary for the mason to fuss with operating parts when setting.



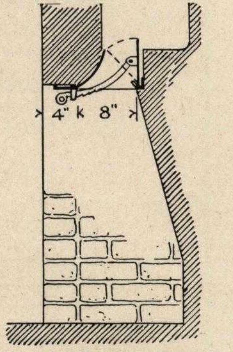
Details of construction of fireplace 20″ deep with Covert Series E Improved Damper and Steel Smoke Chamber.



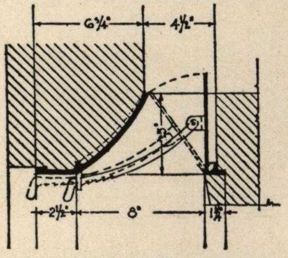
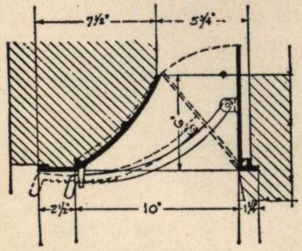
Series D is 8 inches deep (inside measure) and is for fireplaces 18 inches deep or under. Series E is 10 inches deep (inside measure) and is for fireplaces 20 inches deep or under. For fireplaces deeper than 20 inches we recommend our deeper "Old Style" Dampers shown on page six.



Drawing showing Damper with front flange omitted for use in fireplace having curved arch. These are made to order without extra charge.



Series D (8″ Damper) built into Fireplace 18″ deep.

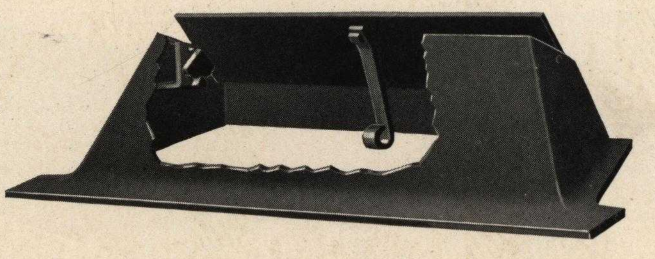
Section of Series	Improved Throat and Damper										Steel Smoke Chamber		
	Damper Number	Front width of Fireplace, inches	Base opening of Throat not including flange, inches			Shipping weight, lbs.	Proper flue lining Exterior dimensions Inches	Equivalent round flue Inside diam., inches	Code Word of Damper	Price of Damper	Shipping weight, lbs.	Code Word of Smoke Chamber	Price of Smoke Chamber
			Front	Rear	Depth								
SERIES D 	424	24	24	18	8	23	8½x8½	8	Dotard	$5.50	12	Force	$4.75
	430	30	30	24	8	31	8½x13	10	Dingle	6.00	20	Frond	5.50
	432	32	32	26	8	32	8½x13	10	Deacon	6.50			
	436	36	36	30	8	34	8½x13	10	Deak	7.25			
	442	42	42	36	8	38	13 x13	12	Drake	9.00	30	Friend	6.00
	448	48	48	42	8	47	13 x13	12	Dram	10.50			
	454	54	54	48	8	54	13 x18	15	Drone	11.50	52	Field	7.00
	460	60	60	54	8	60	13 x18	15	Desert	12.50			
SERIES E 	524	24	24	18	10	33	8½x8½	8	Intro	$7.00	12	Force	$4.75
	530	30	30	24	10	38	8½x13	10	Impart	8.10	20	Frond	5.50
	532	32	32	26	10	40	8½x13	10	Impel	8.30			
	536	36	36	30	10	43	8½x13	10	Inert	9.00			
	542	42	42	36	10	50	13 x13	12	Infer	10.50	30	Friend	6.00
	548	48	48	42	10	54	13 x13	12	Impost	11.30			
	554	54	54	48	10	72	13 x18	15	Incur	13.50	52	Field	7.00
	560	60	60	54	10	74	13 x18	15	Impale	15.00			

IMPORTANT—The above flue sizes apply only to Fireplaces having ordinary height. To determine proper flues for high Fireplaces refer to our instructions on page four.

Smoke Chamber for 8½ x 13 flue is reversible and will properly connect, whether the shorter or longer dimension runs parallel with the breast. For 13 x 18 flue it is necessary for us to know which dimension runs parallel with the breast.

COVERT OLD STYLE THROAT AND DAMPER

POKER OPERATED



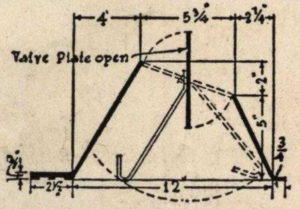
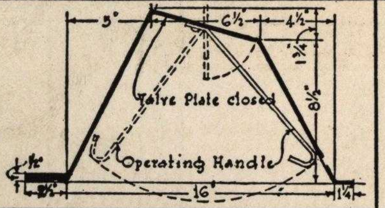
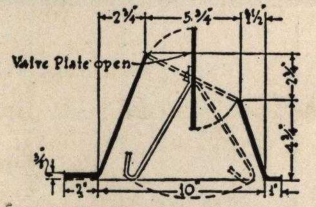
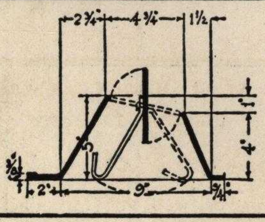
THIS Old Style Covert Dome Damper is preferred by some architects and builders on account of its high dome, heavy construction, and because it has stood the test of years of successful use.

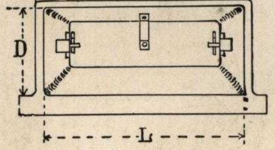
The Old Style Damper has a valve swiveled in the center and is operated with a poker by means of a handle fixed to the valve plate. The valve may be fixed in three positions, namely, full open, half open, and closed—except Series F, which has only the full open or closed position.

It is made in four different series having different cross sections making it adaptable to almost any condition that may arise in fireplace construction.

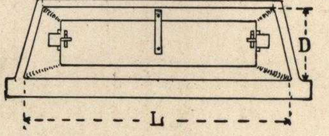
The Series B is the deepest damper and is made up to seven feet long.

The Steel Smoke Chamber is used with the Old Style Damper the same as with the Improved.

		Old Style Throat and Damper									Steel Smoke Chamber		
Dimensions of Old Style Dampers, in section		Damper Number	Width of Fireplace	Code Word of Damper	Length L—inches	Depth D—inches	Weight, lbs.	Proper Flue Lining —Exterior Dimensions, inches	Equivalent Round Flue, Inside Diameter, inches	Price of Damper	Shipping Weight, pounds	Code Word of Smoke Chamber	Price of Smoke Chamber
 4" 5¾" 3¼" Valve Plate open 2" 5" 12" 2½"	Series A Square Ends	224	2'0"	Alien	24	12	26	8½x8½	8	$7.30	12	Force	$4.75
		230	2'6"	Abet	30	12	36	8½x13	10	8.50	20	Frond	5.50
		232	2'8"	Altar	32	12	40	8½x13	10	9.25			
		236	3'0"	Agent	36	12	46	8½x13	10	10.50			
		242	3'6"	Anvil	42	12	56	13 x13	12	12.75	30	Friend	6.00
		248	4'0"	Agate	48	12	66	13 x13	12	15.00			
		254	4'6"	Apex	54	12	80	13 x18	15	17.00	52	Field	7.00
		260	5'0"	Auger	60	12	97	13 x18	15	20.35			
		272	6'0"	Amend	72	12	110	18 x18	20	23.00	75	Facile	8.00
 3" 6½" 4½" Valve Plate closed Operating Handle 8½" 16" 1¼"	Series B Square Ends	36½	3'0"	Bark	36	16	85	8½x13	10	18.00	20	Frond	5.50
		42½	3'6"	Brake	42	16	93	13 x13	12	20.00	30	Friend	6.00
		48½	4'0"	Blank	48	16	105	13 x13	12	22.00			
		54½	4'6"	Band	54	16	120	13 x18	15	24.00	52	Field	7.00
		60½	5'0"	Bold	60	16	130	13 x18	15	26.00			
		72½	6'0"	Bind	72	16	176	18 x18	20	34.00			
		84½	7'0"	Brand	84	16	210	18 x24	22	38.00	75	Facile	8.00
	Series C Splayed Ends	30	2'6"	Claim	30	10	36	8½x13	10	8.50	20	Frond	5.50
		36	3'0"	Cloth	36	10	46	8½x13	10	10.50			
		42	3'6"	Cadet	42	10	56	13 x13	12	12.75	30	Friend	6.00
		48	4'0"	Clump	48	10	66	13 x13	12	15.00			
	Series F Splayed Ends	724	2'0"	Filter	24	9	25	8½x8½	8	6.10	12	Force	4.75
		730	2'6"	Ford	30	9	30	8½x13	10	7.30	20	Frond	5.50
		732	2'8"	Foamer	32	9	32	8½x13	10	7.60			
		736	3'0"	Feast	36	9	35	8½x13	10	8.50			
		742	3'6"	Finder	42	9	40	13 x13	12	9.75	30	Friend	6.00
		748	4'0"	Faster	48	9	43	13 x13	12	10.75			

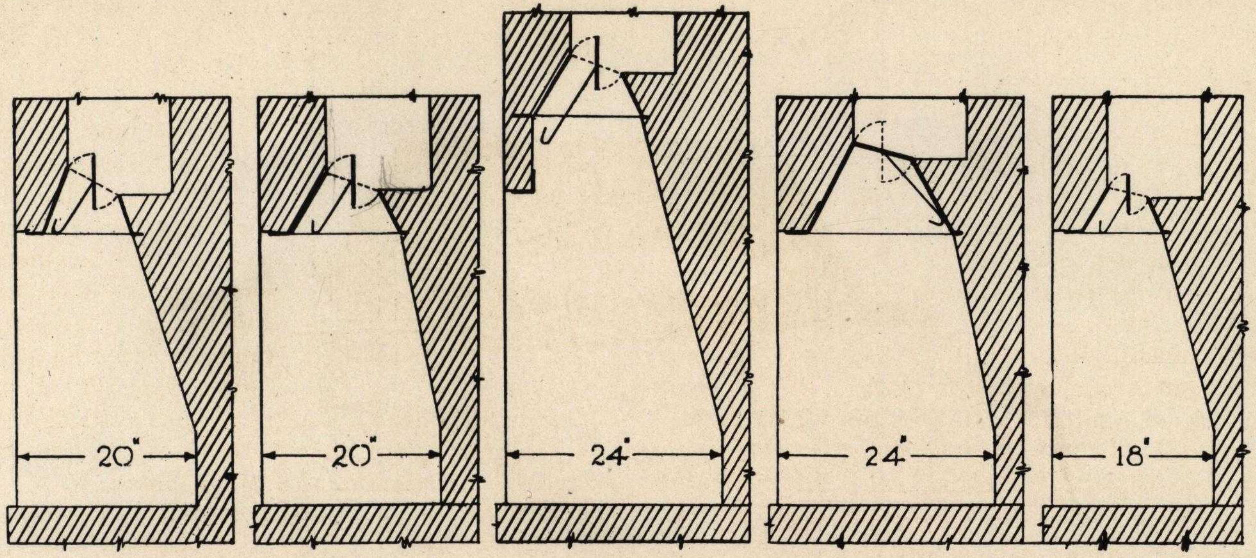


Plan (looking up) Series A and B



Plan (looking up) Series C and F

COVERT OLD STYLE DAMPERS IN SECTION



Series C

Series A

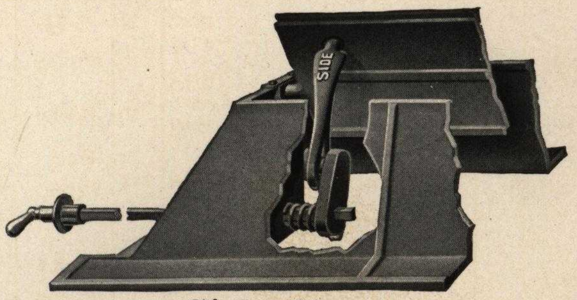
Series A (Set up)

Series B

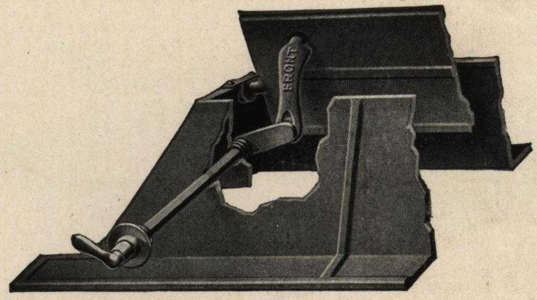
Series F

Sections showing how Old Style Dampers are used.

COVERT FACE OR SIDE CONTROL DAMPER



Side Control



Front Control

THIS type of damper may be operated by a brass handle from the face or side of the fireplace.

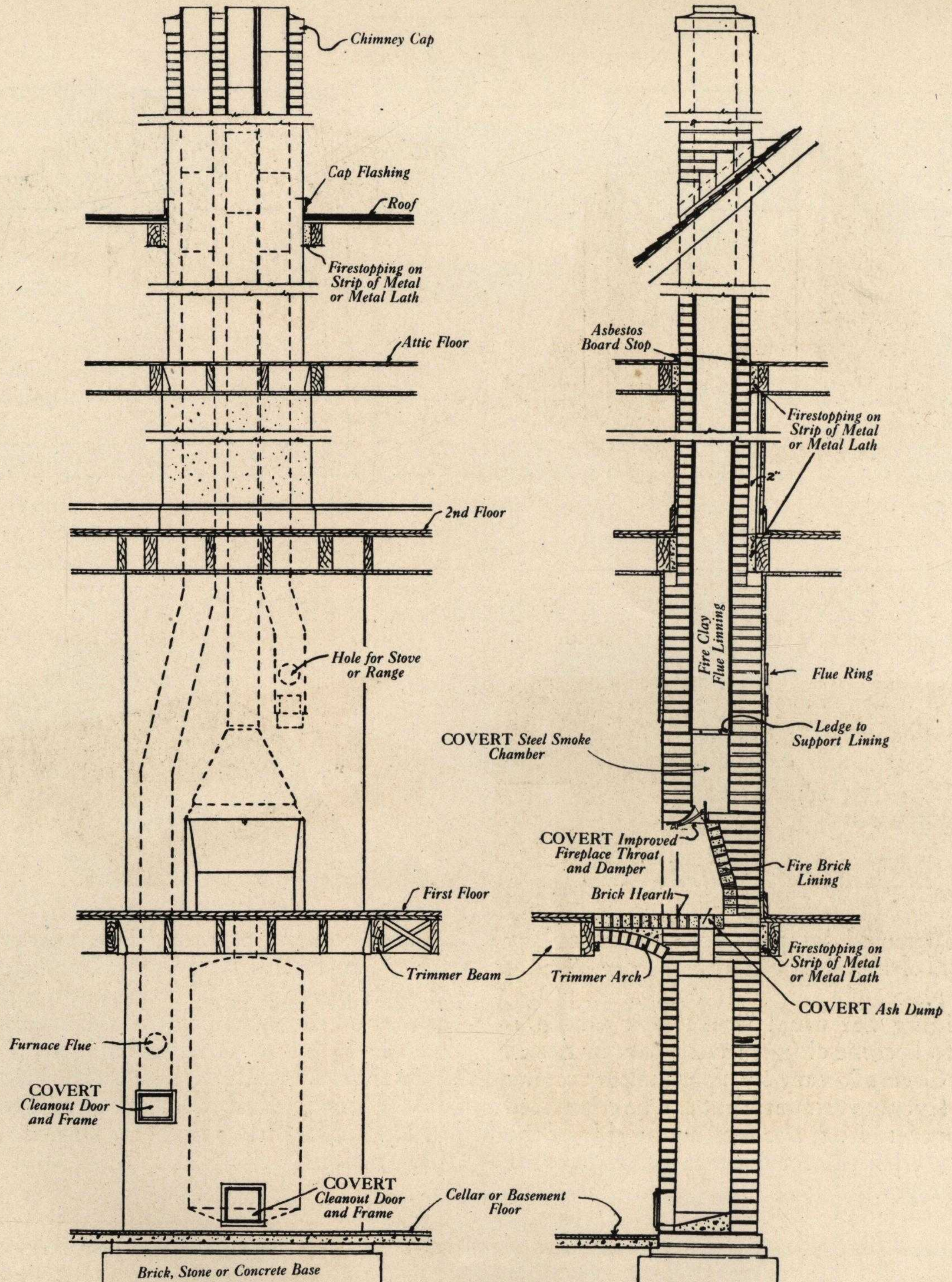
Avoiding the usual worm gear which is likely to become clogged with soot or rusted in, the Covert Rotary Damper makes use of a simple lever movement, that can be connected up to operate from the face or the side of the fireplace with the mechanism accompanying each damper.

The operating parts of this damper are made heavy, to last as long as the fireplace itself. A well finished solid brass knob and plate appear on the face or side of the fireplace, the handle being securely fastened to a heavy steel shaft which runs through the brickwork and is connected to the crank and "Front" or "Side" connecting rod as shown in the illustrations.

DIMENSIONS AND PRICES

COVERT "ROTARY" THROAT AND DAMPER										STEEL SMOKE CHAMBER		
Damper Number	Front Width of Fireplace Inches	Base Opening of Throat not including Flanges Inches			Shipping Weight Pounds	Proper Flue Lining—Exterior Dimensions Inches	Equivalent Round Flue—Inside Diameter Inches	Code Word of Damper	Price of Damper	Shipping Weight Pounds	Code Word of Smoke Chamber	Price of Smoke Chamber
		Front	Rear	Depth								
624	24	24	18	9	25	8½x 8½	8	Rhino	$7.20	12	Force	$4.75
630	30	30	24	9	30	8½x13	10	Rebus	8.40	20	Frond	5.50
632	32	32	26	9	32	8½x13	10	Reign	8.70			
636	36	36	30	9	35	8½x13	10	Realm	9.60			
642	42	42	36	9	40	13 x13	12	Realty	10.85	30	Friend	6.00
648	48	48	42	9	43	13 x13	12	Rescue	11.85			

SUGGESTED DRAWING OF CHIMNEY



Chimney Cap
Cap Flashing
Roof
Firestopping on Strip of Metal or Metal Lath
Attic Floor
2nd Floor
Hole for Stove or Range
First Floor
Trimmer Beam
Furnace Flue
COVERT Cleanout Door and Frame
COVERT Cleanout Door and Frame
Cellar or Basement Floor
Brick, Stone or Concrete Base
Scale in Feet
0 1 2 3 4 5
Asbestos Board Stop
Firestopping on Strip of Metal or Metal Lath
2"
Fire Clay Flue Linning
Flue Ring
Ledge to Support Lining
COVERT Steel Smoke Chamber
COVERT Improved Fireplace Throat and Damper
Fire Brick Lining
Brick Hearth
Firestopping on Strip of Metal or Metal Lath
Trimmer Arch
COVERT Ash Dump

Elevation

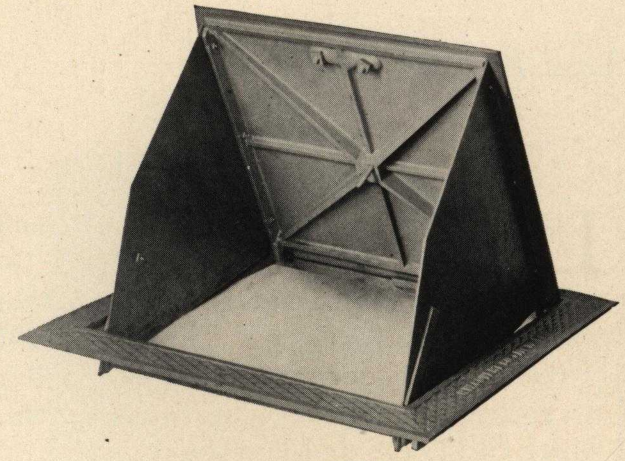
Section

SPECIFICATIONS

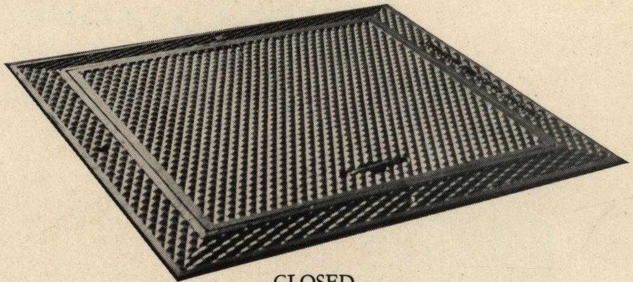
1. Furnish for each fireplace a Covert ("Old Style," "Improved" or "Rotary") Damper and Steel Smoke Chamber. The front flange of the Damper shall act as a lintel and the smoke chamber shall connect with the flue, as shown on the detail drawings or in the catalogue of the H. W. Covert Company, 243 East 44th Street, N. Y. C.
2. At the level of the top of the damper form wind shelf as shown on drawings.
3. In carrying up the flues, follow up each length of flue-lining with a bag filled with hay or shavings completely closing the flue, to prevent the clogging of the flue by mortar droppings.
4. The Contractor shall consult with the H. W. Covert Co. regarding the selection of the proper dampers, etc., to meet the conditions of these fireplaces and to secure the best results.

OTHER COVERT SPECIALTIES

COVERT SAFETY COAL HOLE FRAME AND COVER



OPEN

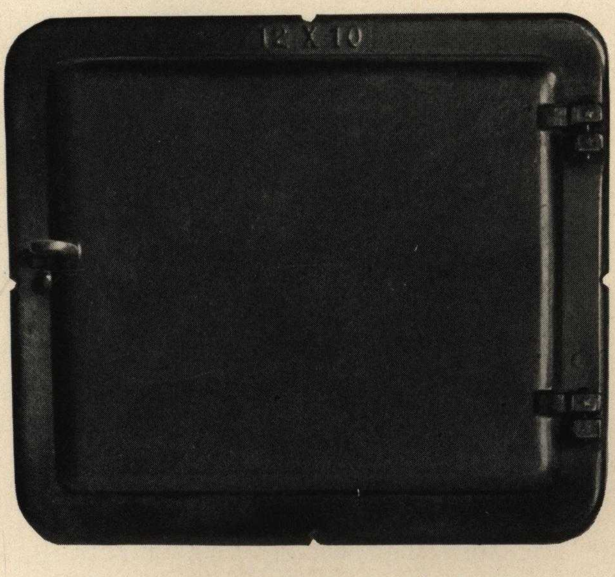


CLOSED

Designed in accordance with the requirements of Bureau of Highways, New York City.

A heavy cast-iron frame and cover. Steel sheets protect the sides of the opening when open. Flush non-slip cover and frame, and lifting ring. Pivoted support holds the cover open when in use. An eye on the under side of cover to secure a chain for fastenings. Four bolts anchor frame into concrete. Size of opening 20″ x 20″. Price $22.00. With extra heavy cover, $24.00.

CAST-IRON CLEAN-OUT DOORS



THESE doors have frames 1¾″ wide with flanges 1″ deep.

Price quoted includes anchors in all cases.

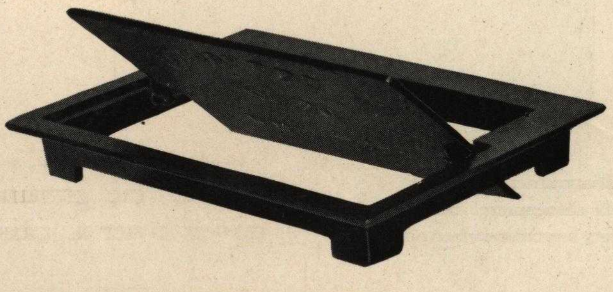
Special prices will be quoted on sizes other than those listed below, if desired.

NOTE — The two larger sizes of the doors listed above are made with very heavy frames, brass hinge pins and drop latches.

Table showing sizes and prices of doors

Width of Opening	Height of Opening	Brick Opening inches	Code Word	Price
8″	8″	8¼x 8½	Deck	$1.60
12″	10″	12¼x10½	Deer	2.00
12″	12″	12¼x12½	Disc	2.75
16″	12″	16¾x14	Deep	3.50
16″	16″	16¾x18	Dame	5.00
20″	16″	20¾x17¾	Dial	6.00
20″	21″	20¾x23	Dole	8.50
24″	24″	25 x25	Dark	14.00
21″	32″	22 x33	Dean	16.00

FLUSH HEARTH DUMP



THE Covert Flush Hearth Dump has a substantial frame, with flanges about one inch deep in which is hung a tight fitting flush cover plate, overweighted on one side so that it will not dump unless pushed down with a poker.

Table of Hearth Openings and Prices

Hearth Dump Number	Hearth Opening	Code Word	Price
No. 20	6″x 9″	Delta	$ .80
No. 40	6″x15″	Dream	1.50

ROUND FLUSH COAL HOLE FRAME AND COVER

A heavy cast-iron frame and cover, ribbed on the under side. An eye to secure chain. 16″ opening, $7.00, 20″ opening, $9.50, 24″ opening, $14.00.

OTHER COVERT SPECIALTIES

COVERT GRADE LINE COAL CHUTE

For Buildings with Low Foundations

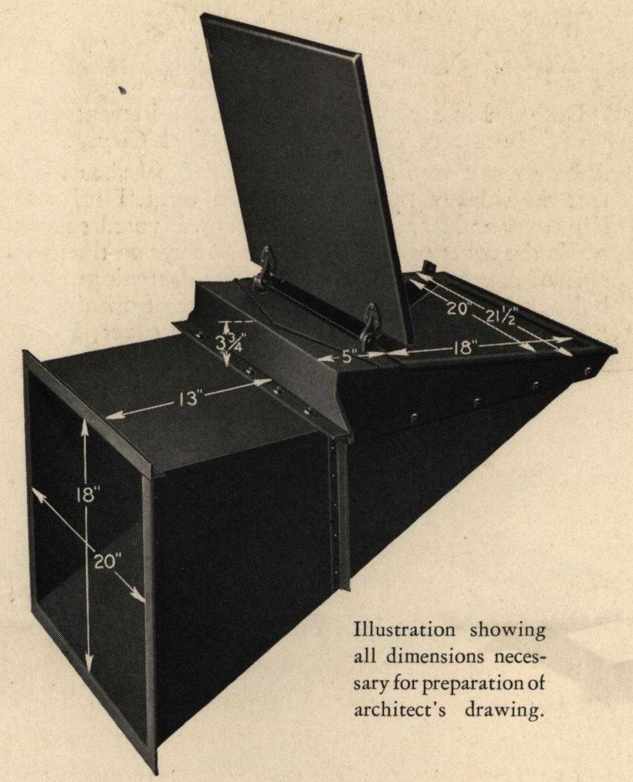


Illustration showing all dimensions necessary for preparation of architect's drawing.

LOW foundations in many modern homes do not allow sufficient room for the installation of a coal chute in the foundation wall. In such cases our grade line chute will provide a coal door set a few inches above the ground, connected to a heavy steel chute, which carries the coal into the cellar.

Trouble has been experienced in other chutes by water leaking through the crack between the door and the frame and running into the cellar.

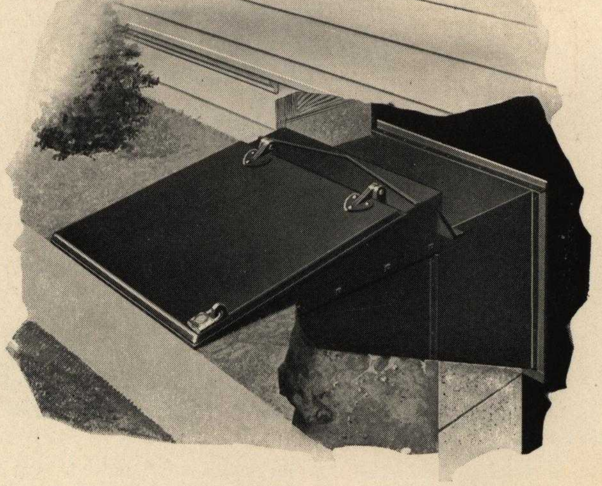
The Covert Chute corrects this serious fault by having the door raised several inches above the ground and also by dishing the cover over a raised rim carried around the opening.

Getting away from the usual spring locking device which is very likely to get out of order and cause trouble, our door is locked from the outside by a brass padlock.

The door is locked by placing a padlock through a hole in the heavy lug attached to the frame, which passes through a slot in the cover.

The frame is made of heavy cast iron with No. 10 gauge steel cover and malleable hinges. The body is made of No. 14 gauge steel reinforced with angles.

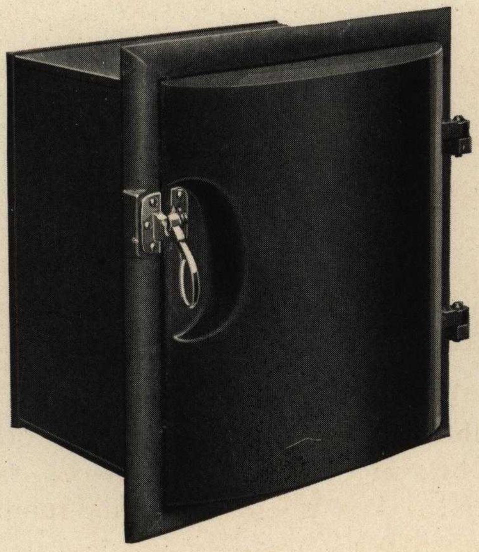
Covert Grade Line Coal Chutes are made in one size only and cost $33 each.



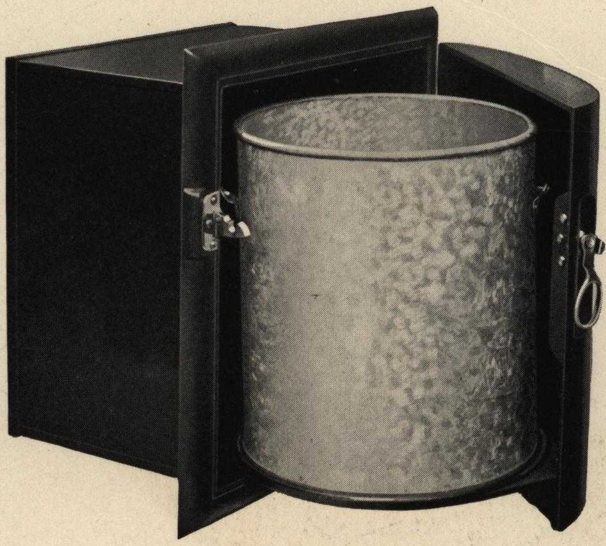
View installed clearly showing means of locking the cover.

OTHER COVERT SPECIALTIES

COVERT GARBAGE RECEIVER



Closed

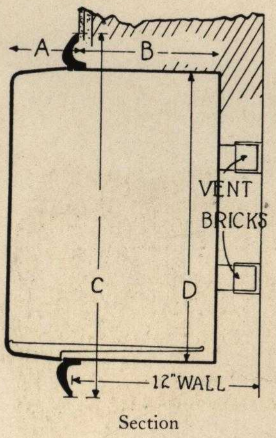


Open

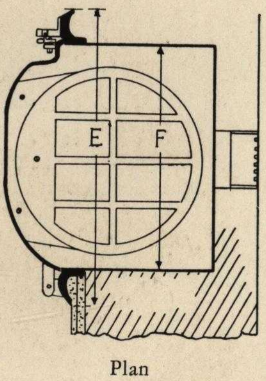
IN Apartment house or private home the convenient and sanitary place to keep the garbage can is in a ventilated receiver built into the wall. Doors and frames of the Covert Garbage Receptacle are made of cast iron, with a shelf on the door to support the can, so that when the door is opened the can is ready to receive the garbage. Bodies are made of No. 16 steel and sufficiently heavy to support the wall above.

The No. 3 is provided with a nickeled knob with friction catch while the No. 4 has a heavy, well finished brass refrigerator latch.

Each box is provided with two series of three-quarter inch holes at the rear. With the No. 3 is provided a steel vent to be placed in the brick joint at one of the series of holes. The No. 4 is provided with a cast iron vent for the same purpose. The two series of holes give the setter a choice of location for the vent. Thus fresh air circulates through the receptacle and helps to keep it odorless and fresh.



Section



Plan

COVERT FIREPLACE DAMPERS

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